May 1, 2017

Surface Water Supply Index

Basin or Region	Apr EOM* Storage	MAY-JUL Forecast	Storage + Forecast	Percentile	SWSI#	Years with similiar SWSI
	KAF ^	*KAF ^*	*KAF ^*	*%*		
Bear River	**883.3**	**360.0**	**1243.3**	**82**	**2.63**	**82, 85, 97, 98**
Woodruff Narrows	**50.8**	**167.0**	**217.8**	**89**	**3.29**	**95, 84, 83, 86**
Little Bear	**10.4**	**64.0**	**74.4**	**88**	**3.21**	**99, 97, 98, 11**
Ogden River	**81.7**	**134.0**	**215.7**	**76**	**2.19**	**82, 05, 93, 97**
Weber River	**339.6**	**500.0**	**839.6**	**89**	**3.29**	**95, 86, 84, 83**
Provo River	**974.5**	**178.0**	**1152.5**	**42**	**-0.69**	**13, 95, 01, 08**
Western Uinta	**160.3**	**167.0**	**327.3**	**97**	**3.95**	**86, 11, 95, 05**
Eastern Uinta	**43.3**	**65.0**	**108.3**	**55**	**0.44**	**08, 82, 10, 09**
Blacks Fork	**24.7**	**115.0**	**139.7**	**91**	**3.45**	**86, 98, 84, 11**
Smiths Fork	**9.6**	**36.0**	**45.6**	**83**	**2.74**	**99, 98, 84, 95**
Price River	**34.3**	**54.0**	**88.3**	**82**	**2.63**	**98, 95, 11, 82**
Joe's Valley	**31.6**	**69.0**	**100.6**	**66**	**1.32**	**08, 96, 97, 99**
Ferron Creek	**10.9**	**45.0**	**55.9**	**74**	**1.97**	**85, 98, 93, 06**
Moab	**2.1**	**2.8**	**4.9**	**65**	**1.21**	**91, 07, 94, 97**
Upper Sevier	**93.8**	**57.0**	**150.8**	**61**	**0.88**	**94, 01, 81, 06**
San Pitch	**4.5**	**17.5**	**22.0**	**32**	**-1.54**	**13, 01, 89, 08**
Lower Sevier	**94.9**	**89.0**	**183.9**	**42**	**-0.66**	**01, 16, 13, 96**
Beaver River	**12.4**	**24.0**	**36.4**	**55**	**0.44**	**10, 96, 06, 81**
Virgin River	**39.2**	**37.0**	**76.2**	**65**	**1.28**	**00, 99, 01, 06**

**EOM, end of month; # SWSI, surface water supply index; ^KAF, thousand acre-feet.*

What is a Surface Water Supply Index?

The Surface Water Supply Index (SWSI) is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based on current snowpack and other hydrologic variables. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero (0) indicating median water supply as compared to historical analysis. SWSI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index.

Utah Snow Surveys has also chosen to display the SWSI value as well as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has the simplest application. It can be best thought of as a scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and a value of 50 representing average conditions. This rating scale is a percentile rating as well, for example a SWSI of 75% means that this years water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a SWSI of 10% means that 90% of historical events have been greater than this one and that only 10% have had less total water supply. This scale is comparable between basins: a SWSI of 50% means the same relative ranking on watershed A as it does on watershed B, which may not be strictly true of the +4 to -4 scale.

For more information on the SWSI go to: www.ut.nrcs.usda.gov/snow/ on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.